

Preservation Controls
Library of Congress Definitions
(by type and cycle)

| Preservation Controls | In-Process Cycle | In-Storage Cycle | In-Use Cycle | In-Transit Cycle | On-Exhibit Cycle | Definition |
|-----------------------------------|------------------|------------------|--------------|------------------|------------------|---|
| ENVIRONMENT | | | | | | Physical, chemical, and biotic parameters affecting collection preservation |
| Development of specifications | ● | ● | ● | ● | ● | Specifications for temperature, relative humidity, pollutant and particulate levels, visible light, ultraviolet radiation, pest control, and other environmental considerations |
| Regulating environment, level 3 | ● | ● | ● | ● | ● | Environment is controllable within tight tolerances required by special sensitive materials |
| Regulating environment, level 2 | ● | ● | ● | ● | ● | Environment is controllable and generally meets specifications |
| Regulating environment, level 1 | ● | ● | ● | ● | ● | Environment is controllable to a limited extent and does not generally meet specifications |
| Monitoring environment, level 4 | ● | ● | ● | ● | ● | Environment is monitored and recorded continuously with alarms to a 24-hour staffed site |
| Monitoring environment, level 3 | ● | ● | ● | | ● | Environment is monitored continuously with alarms to a site staffed fewer than 24 hours per day |
| Monitoring environment, level 2 | | | | | ● | Continuous monitoring with courier escort oversight |
| Monitoring environment, level 1 | ● | ● | ● | ● | ● | Monitoring is done as required or intermittently; there is no alarming capability |
| Systems and equipment maintenance | ● | ● | ● | ● | ● | Review that the range of emergency preparedness and response equipment and systems is checked and maintained on a regularly scheduled basis |

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| EMERGENCY PREPAREDNESS | | | | | | Readiness for responding to threats to the collections, such as from water damage, fire, smoke, or physical impact |
| Readiness planning | | | | | | Preparations for being able to respond effectively and efficiently to an emergency |
| Site plans and needs assessment | ● | ● | ● | | ● | On site-by-site basis, determine locations of priority collection materials and emergency considerations for each area; resolve site vulnerabilities |
| Training, level 2 | ● | ● | ● | | ● | Training in recovery and handling of damaged materials |
| Training, level 1 | ● | ● | ● | ● | ● | Training in use of React Paks, emergency awareness, and emergency discovery response; training for emergency personnel such as firefighters and police in responding to site-specific collection emergency |
| Detection planning | | | | | | Preparations for development of effective systems to discover emergencies as early as possible to minimize loss and damage |
| Detection systems, level 2 | ● | ● | ● | | ● | Strategically placed water, smoke, and heat detection sensors, and cameras |
| Detection systems, level 1 | ● | ● | ● | | ● | General placement for water, smoke, and heat detection sensors, and cameras |
| Detection systems maintenance | ● | ● | ● | | ● | Inspection, testing, and maintenance of detection systems; at least once a year |
| Fire suppression systems, level 2 | ● | ● | ● | | ● | Fire suppression systems that do not cause damage to objects when used |
| Fire suppression systems, level 1 | ● | ● | ● | | ● | Water systems |
| Notification systems | ● | ● | ● | | ● | Call system or alarms to Protective Services; 24-hour Collection Emergency Response Team |

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| Development of new technologies in fire suppression and detection | ● | ● | ● | | | Research and testing of developing technologies for improved response and minimization of collection damage |
| Recovery planning | | | | | | Preparations to be able to execute efficient, effective response in an emergency, so that loss and damage to the collections are minimized |
| Communication systems | ● | ● | ● | ● | ● | Beeper, walkie-talkie, and telephone communication systems for communicating during emergency and recovery |
| Recovery services pre-contract preparation | ● | ● | ● | | ● | Before major emergency, established arrangements to bring in outside contractors to provide necessary assistance |
| In-house recovery | ● | ● | ● | | ● | On-site Preservation and other Library personnel to provide recovery services in response to a collection emergency |
| In-house supplies and equipment | ● | ● | ● | | ● | Availability of React Paks, fans, appropriate clothing, blotters, dehumidifiers, and other equipment and supplies needed for emergency response |
| Development of recovery protocols | ● | ● | ● | | ● | Research and testing of new methodologies for emergency recovery of collection materials |
| Reserve funds | ● | ● | ● | | ● | Funding for large-scale emergencies requiring special contracting assistance |
| Systems and equipment maintenance | ● | ● | | | | |
| STORAGE | | | | | | Physical parameters affecting collection preservation |
| Development of specifications | ● | ● | ● | ● | ● | Specifications for shelving, furniture, and equipment that may affect collections through direct contact, physical impact, use, or other means |
| Materials testing | ● | ● | ● | ● | ● | Determination of whether selected materials meet specifications |

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| Furniture and equipment, level 2 | ● | ● | ● | ● | ● | Customized protection according to object, including cases for exhibition |
| Furniture and equipment, level 1 | ● | ● | ● | ● | ● | Mass-produced furniture, shelving, and equipment, including exhibit cases |
| Collection density, level 2 | ● | ● | ● | ● | | Each item is fully supported on shelf; collection item is minimally stressed on shelf or during retrieval and return to shelf |
| Collection density, level 1 | ● | ● | ● | ● | | High density; adequate support; materials easily filed and retrieved without damage or shifting |
| Separation of work and storage | ● | ● | ● | ● | ● | No mixed functions at workspace or room; separation of collections in work area; food and drink are not permitted in exhibition or collections areas |
| Housekeeping | ● | ● | ● | ● | ● | Collection areas are kept free of dust, litter, and other debris; regular trash collection. |
| Furniture and equipment maintenance | ● | ● | ● | ● | ● | Maintenance of furniture and equipment in safe and good working order |
| HANDLING | | | | | | Prevention of damage to collections through appropriate techniques and use |
| Development of specifications | ● | ● | ● | ● | ● | Specifications for photocopies, imaging equipment, exhibit supports, book trucks, and other objects that come into contact with collections when handled |
| Training | ● | ● | ● | ● | ● | Education of staff and users in proper handling and storage practices |
| Staff supervision of users, level 3 | ● | ● | ● | | | Constant, direct supervision, in person or remotely |
| Staff supervision of users, level 2 | ● | ● | ● | | ● | Focused, intermittent supervision, in person or remotely |
| Staff supervision of users, level 1 | ● | ● | ● | | ● | General oversight of area |
| Transit supervision, level 2 | | | | ● | | Escorted transit |

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| Transit supervision, level 1 | | | | ● | | Open transit |
| Restrictions in use, level 4 | ● | ● | ● | | ● | Handled only by authorized Library staff |
| Restrictions in use, level 3 | | | ● | | | Surrogates must be used prior to use of originals |
| Restrictions in use, level 2 | ● | ● | ● | | ● | Special instructions, procedures, supplies, or equipment may be required, e.g., “Do not photocopy,” and “Do not circulate” for interlibrary loan |
| Restrictions in use, level 1 | ● | ● | ● | | ● | If handled properly, items may be used by readers; general Library handling requirements apply |
| Appropriate workspace | ● | ● | ● | ● | ● | Adequate space to support Library materials |
| Supplies and equipment | ● | ● | ● | ● | ● | White gloves, bolsters, cradles, edge copiers, proper book trucks, etc. |
| NEEDS ASSESSMENT | | | | | | Review of physical condition and curatorial priorities to determine priority selection for preservation action |
| Condition evaluation, level 3 | ● | ● | | | ● | Survey of individual items to determine physical condition and issues affecting preservation; for exhibits, before display and possibly after |
| Condition evaluation, level 2 | ● | ● | | | | Survey of discrete collections to determine physical condition and issues affecting preservation |
| Condition evaluation, level 1 | ● | ● | | | | Survey to determine physical condition and issues affecting preservation based on statistical sampling of collections |
| Curatorial evaluation, level 2 | ● | ● | | | | Determination of curatorial priority for individual items |
| Curatorial evaluation, level 1 | ● | ● | | | | Determination of curatorial priority for discrete collections |

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| Prioritization and selection for preservation | ● | ● | | | | Determination of priority for preservation action based on combined condition and curatorial priorities |
| PHYSICAL TREATMENT | | | | | | Preservation action affecting the physical nature of the collection item |
| Development of materials specifications | ● | | | | ● | Research and development of criteria for the materials that may be used for physical treatment and that will support collection preservation |
| Materials testing | ● | | | | ● | Determination on whether selected materials meet specifications |
| Development of treatment methodologies | ● | | | | ● | Research and development of criteria for the methodologies that may be used for physical treatment and that will support collection preservation |
| Physical treatment, level 2 | ● | | | | ● | Conservation treatment customized for individual or groups of collection items; chemical analysis performed in concert with conservation treatment |
| Physical treatment, level 1 | ● | | | | | Conservation treatment performed in a mass approach, including mass deacidification, library binding, or repair |
| Stabilization, including boxing, protective enclosures, cradles, or matting | ● | ● | ● | ● | ● | Preservation action that minimizes further change over time, including boxing, protective enclosures, or minor repair |
| Development of labeling and marking methodologies and materials specifications | ● | | | | | Research and development of criteria for labeling or marking methods and materials |
| REFORMATTING | | | | | | Copying information from an original item to a stable medium that may be a different type from the original, e.g., paper to acid-free paper; paper to microfilm; acetate and nitrate film to polyester film; or analog sound recording wax cylinder to digitized recording on tape |

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| Development of reformatting methodologies | ● | | | | ● | Documented best practices and standards to determine format(s), techniques to prepare materials for reformatting, equipment, and techniques in using equipment to produce preservation quality product |
| Development of materials specifications | ● | | | | ● | Requirements for media to which information will be copied |
| Materials testing | ● | | | | ● | Established procedures are used for testing media on which information is reformatted |
| Reformatting actions, level 3 | ● | | | | ● | Create a surrogate; keep original (A surrogate is a copy that will be served to the user in lieu of an original that is either too precious, too fragile, or too great a security risk to serve except in circumstances that require use of the original. In most instances, the copy is of preservation quality, meeting nationally recognized standards or guidelines.) |
| Reformatting actions, level 2 | ● | | | | ● | Copying duplicate fragile materials on unstable media (Unstable media are intrinsically unstable, e.g., acidic paper or nitrate film—or are assembled or packaged in an unstable manner, e.g., substandard bookbinding or obsolete or proprietary or unsupportable software—or are no longer manufactured.) |
| Reformatting actions, level 1 | ● | | | | | Replace materials that require obsolete equipment (Obsolete equipment is equipment that is no longer manufactured or distributed and for which parts are no longer manufactured or distributed or are new models or types of equipment that do not work to retrieve and “read” all the information on the original item, e.g., wax cylinders or 00018 PCs.) |